WORK PLAN FOR
EXPLORATORY BORINGS IN
ALSCO COMMUNITY PARK
TASK 3
SUPPLEMENTAL RI/FS FOR
THE NATRONA ALSCO COMMUNITY PARK SITE
HARRISION TOWNSHIP, PENNSYLVANIA

## Prepared for:

PENNWALT CORPORATION
Central Engineering
King of Prussia, Pennsylvania

Prepared by:

AWARE Incorporated 227 French Landing Drive Nashville, Tennessee 37228

July 1988

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#### consultants in environmental management

August 1, 1988

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Mr. Glenn D. Loutzenhiser Central Engineering Pennwalt Corporation 900 First Avenue King of Prussia, PA 19406

RE: Work Plan for Exploratory Borings, Alsco Community Park

Dear Doug:

Enclosed are twelve (12) copies of the Work Plan for proposed Exploratory Borings in the Natrona Alsco Community Park. This proposal and summary of completed site activities associated with the park area were prepared in accordance with Task 3 of the Work Plan for the Supplemental RI/FS, Natrona Alsco Community Park, Harrison Township, Pennsylvania.

We welcome your questions and comments on the enclosed information.

Sincerely,

AWARE Incorporated

Robert J. Guidry

Hydrogeologist

Scott D. MacMillin

Senior Hydrogelogist

deffrey L. Pintenich, P.E.

Vige President

Enclosures

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#### 1.0 INTRODUCTION

Nine exploratory borings are proposed to be drilled in the Alsco Community Park located northwest of the Allegheny Ludlum landfill in Harrison Township, Pennsylvania. The primary objectives of these proposed exploratory borings are to define the extent and to characterize the nature of the fill in the park area. The following is a summary of the results from the site investigation tasks associated with the park area which have been completed, and a description of the proposed exploratory boring activity. This activity is required under Task 3 of the approval RI/FS Work Plan.

#### 1.1 AERIAL PHOTOGRAPHS

A series of stereo aerial photographs of the site, taken from the period of 1939 through 1982, were examined in an attempt to identify boundaries of historical site activity in the area where the park is now located. The suspected boundaries of activity identified over the park area are depicted on Figure 1.

#### 1.2 SURFACE GEOPHYSICAL SURVEY

124

A geophysical survey was conducted at the site in January and February, 1988, in an attempt to define fill boundaries, qualitatively characterize the nature of the fill present, and to locate the rail car which was alleged to have been buried at the site. The surface geophysical surveys consisted of terrain conductivity, magnetics, seismic profiles, ground penetrating radar (GPR), and resistivity soundings.

By far, the most useful of these surveys were the terrain conductivity and magnetic surveys. These two surveys were conducted by taking measurements on a grid of 50 ft centers covering the park area. The ballpark and tennis court areas were surveyed on a denser spacing of 10 ft centers. The areas of 10 ft

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center measurements were expanded to encompass areas of anomalous readings detected during the 50 ft center reconnaissance. These terrain conductivity and magnetic measurements were contoured on the site topographic map and areas of anomalous readings were delineated. These anomalous areas are outlined in Figure 1.

#### 2.0 DRILLING AND SAMPLING

The nine exploratory borings will be drilled through the unconsolidated soils, terrace deposits, and fill deposits to the top of bedrock. The borings should range from approximately 20 ft to 60 ft total depth. Drilling will be accomplished with an 8 in. diameter hollow stem auger. Continuous samples will be collected during drilling using a 3 in. diameter split-spoon sampler. The samples will be visually examined and described, then stored in glass jars for future examination as needed. In addition, three to five samples per boring will be collected for laboratory analysis of those parameters listed in Table 1. The samples collected for laboratory analysis will be selected based upon visual characteristics observed, obvious chemical odor, and HNU photoionization unit response from the samples. Sample collection and analysis procedures will be conducted in accordance with the approved Work Plan, Appendix 2, QAPP.

Upon the completion of two of the exploratory borings, monitoring wells will be installed for subsequent water quality sampling and water level measurements (under Task 6, Phase III, Additional Hydrogeologic Investigation). Boring EB-2, adjacent to existing monitoring well PN-2 (in the northwestern park area), and the northeastern-most boring (EB-9) will be converted to monitoring wells PN-2 wt and PN-13 wt, respectively. Upon the completion of each of the remaining seven borings, the resultant hole will be backfilled with a cement-bentonite grout to surface. The surface will be covered with clean soil and seeded.

TABLE 1

PARAMETERS FOR LABORATORY ANALYSIS
OF SOIL SAMPLES FROM EXPLORATORY BORINGS

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Pesticides	Volatile Organics	Metals
Alpha-BHC	Benzene	As
Delta-BHC	Chlorobenzene	Pb
Gamma-BHC	1,2-Dichlorobenzene	Zn
4,4-DDT	1,3-Dichlorobenzene	Cr
	1,4-Dichlorobenzene	

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#### 2.1 EAST PARK AREA

The area delineated over the eastern half of the park (Figure 1) appears from the aerial photographs to be an area of suspected past waste disposal. The presence of fill in this area is also indicated from the results of the surface geophysical survey at the site. Several test borings drilled by the PADER in 1976/77 detected subsurface chemical deposits in this area. Three exploratory borings (EB-5, EB-6, and EB-7) are proposed in this area at the locations shown. These borings are expected to confirm the presence of fill in this area, provide information on fill thickness, and characterize the nature of the fill encountered. The western-most of these three borings (EB-5) will serve the dual purpose of possibly detecting the presence of a rail car alleged to have been buried at the site, as indicated by the anomalously high conductivity and magnetic readings detected at that location.

#### 2.2 WEST PARK AREA

The area delineated on Figure 1 in the western section of the park (around the tennis courts) shows the boundaries of surface activity indicated from the 1949 and 1957 aerial photographs. There is evidence from the photographs suggesting that this was an area of sand and gravel extraction. However, since this activity was within close proximity to areas of suspected waste disposal, it could have possibly been used for waste disposal. EPA has suggested that lindane filter cake may have been deposited in this area of the site (Lindane Dump Site Investigation and Evaluation, Natrona Heights, Pennsylvania, TS-PIC-2012, April, 1982). Four exploratory borings, designated EB-1, EB-2, EB-3, and EB-4, are proposed within the boundaries of this area (at the locations shown) in an attempt to identify the presence of buried wastes. If no waste material is encountered in these borings, it will be concluded that the surface activity indicated here from the aerial photographs is a result of sand and gravel extraction operations.

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#### 2.3 NORTH PARK AREA

The two exploratory borings located on the northern slope of the park area (EB-8 and EB-9) will serve to confirm the suspected absence of fill in this area, based upon review of aerial photographs and geophysical findings. Laboratory analyses of the samples from these two locations may represent background levels for comparisons with the analyses of samples from the other seven borings.

### 3.0 SITE OPERATIONS PLAN

Certain specific procedures and safety precautions which are not addressed in the Work Plan will be developed in a site operations plan before commencing with the proposed operations in the park area. This plan will address the following considerations:

- Closure of the park to the public during the field activity.
- The collection, storage, and ultimate disposal of drill cuttings.
- The location and construction of a centralized decontamination area in the park.
- Specific procedures for decontamination of equipment and personnel especially when drilling through suspected areas of past waste disposal.

### 4.0 SCHEDULE

The proposed project schedule for exploratory boring activities in the park is summarized in Figure 2.

FIGURE 2 FROJECT SCHEDULE EXPLORATORY BORINGS HATRONA ALSCO CONNUNITY PARK SITE

Harrison Township, Pennsylvania

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